Soft Issues in IS Projects: Lessons from a Not-For-Profit in New Zealand

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Contents

List of Figures and Tables

List of Abbreviations

SSM   Soft Systems Methodology

SE   System Engineering

SME   Small Medium Enterprises

NFP   Not-For-Profit Organisation

IT   Information Technology

CRM   Customer Relationship Management

Declaration

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the qualification of any other degree or diploma of a University or other institution of higher learning, except where due acknowledgement is made in the acknowledgements.

Rory Shimmin

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I would also like to thank all the participants in this research, especially those who consented to be interviewed; your insights were appreciated.

Finally I would like to thank the Not-for-Profit Organisation where this research took place, for their help and support.

Abstract

Taylor and DaCosta (1999) explored how Soft System Methodology (SSM), having been practiced predominantly in the large organisation sector, could be successfully practiced in a small to medium enterprise (SME). This dissertation is a case study on how SSM can be used within the Not-for-Profit sector in New Zealand. The researcher conducted the SSM process, collected resulting models and requirements, documentation and conducted four interviews with participants. By dealing with a problem situation, rather than looking for an immediate technological solution, when exploring information system requirements, SSM can be used advantageously whether in a Not-for-Profit or SME. The Not-for-Profit culture encourages people collaboration and as SSM is predominantly a people oriented process, it can be shown that this was a suitable process for investigating information system requirements in this Not-for-Profit New Zealand organisation, resulting in several benefits. This study concludes that investigating Not-for-Profit's information system requirements should not be that different to those of a similar sized SME and therefore, SSM should be a suitable process for Not-for-Profits.

Chapter 1: Introduction

1.1 Introduction

Taylor and DaCosta (1999) concluded that when dealing with complex information system problems, Soft System Methodology (SSM) gave a better understanding of the problem situation than when the system was looked at purely from a hard, technological angle. Also, that there was little difference between using SSM in a large organisation to that of a small to medium enterprise (SME) (Taylor & DaCosta, 1999). Further to this, they used the analogy of 'efficiency vs. effectiveness', where efficiency is 'how we address a problem', compared to effectiveness, stating 'what is the problem situation'. An in depth investigation of the problem situation is needed before looking at how to fix the problem. Addressing efficiency alone could be considered a quick fix but does not deal with the real business needs of the situation. Taylor and DaCosta (1999) make the argument that the hard system view has a narrow perspective, (how do we fix the problem) compared to the holistic nature of SSM (what is the problem?, then how do we fix it).

Following from Taylor and DaCosta's (1999) paper, this dissertation will investigate using SSM for a New Zealand Not-for-Profit organisation (NFP) with a case study research approach. Previous case studies using SSM have been conducted in either large organisational sector settings or within the small to medium enterprise sectors (SME). The aim of this study was to find out if SSM would be suitable for a NFP when investigating information system requirements.

1.2 Background

This study was conducted at a NFP organisation in New Zealand. At the time, the NFP was using a donation centric database application. As they ran various services at that time, which were not fund raising specific, the database did not fit their exact requirements. The SSM project in this study explored the problem situation for these services to gain insights as to how best to improve their information systems

requirements. The research question is as follows; is SSM a suitable systems methodology, for understanding and documenting information system requirements in a NFP organisation? Here one means is that is the methodology suitable, or in other words, does SSM fit the NFPs way of doing things? Does the methodology help in exploring a given problem within the NFPs system requirements?

Taylor and DaCosta (1999) researched a small British company of which eight of the staff actively used the company's information system out of a total of eighteen staff. This defined their size of a SME for purposes of their research. This falls within the definition of a SME as stated by the European Union, that a SME should have no more than 250 employees, (Loecher, 2000), and in New Zealand a company with less than 100 employees, (Ayyagari, Beck, & Demirguc-Kunt, 2007). The NFP in this study falls into the SME category by the criteria of size.

The following section outlines the dissertation structure, as per figure 1.1.

1.3 Dissertation Structure

Chapter 1 Introduction

Introduction – Introduce the reason and research question of this dissertation

Background – Explanation describing the situation and background of dissertation

Chapter 2 Research Overview

Introduces SSM

Outlines the SSM research over the past 40 years

Finally identifies that little SSM research has been done in the smaller NFP sector

Chapter 3 Methodology

Introduces the NFP Case Study

Describes the SSM protocols

Describes the Interview protocols

Chapter 4 Analysis

This Chapter covers the SSM and Interview findings

Followed by the analysis of the findings

Chapter 5 Conclusions

The conclusion covers the topics of
The Research Question
Some limitations and lessons learnt
Further Research
Final conclusion

Figure 1.1 Dissertation Structure

The dissertation comprises of five chapters, the introduction, literature review, methodology, analysis and conclusions.

The literature review will firstly cover what research has been done in regard to SSM over the past forty years and identify that mostly, the research has been in the large organisational sector and that there is little evidence that any research has been carried out in the small sized NFP sector. This leads to the research methodology, where the NFP case study is introduced and the SSM and interview protocols are described. Following the methodology chapter is the analysis chapter. In the analysis chapter the SSM and interview findings are discussed. The conclusion follows with sections covering the research question, some limitations, further research and a final conclusion.

The next chapter outlines relevant systems methodology literature with the goal of further defining the research question.

Chapter 2: Literature Review

2.1 Introduction

This literature review covers relevant systems methodology research with a specific focus on SSM for investigating information systems requirements. The literature spans the past forty years. The emphasis of the literature review of the SSM is in what type of organisational sector the research has taken place; SME, NFP or large organisation.

Section 2.2 introduces SSM, with the following sections 2.3 through to 2.7, outlining the reported studies carried out in SSM to identify the sector covered (large organisations, SMEs and large NFPs). The research for the NFP sector reveals that there has been little research investigating information systems requirements in the smaller NFPs sector. Figure 2.1 outlines the SSM research from 1972 to present regarding to what organisational sectors were first researched, progressing to SME and large NFP organisations.
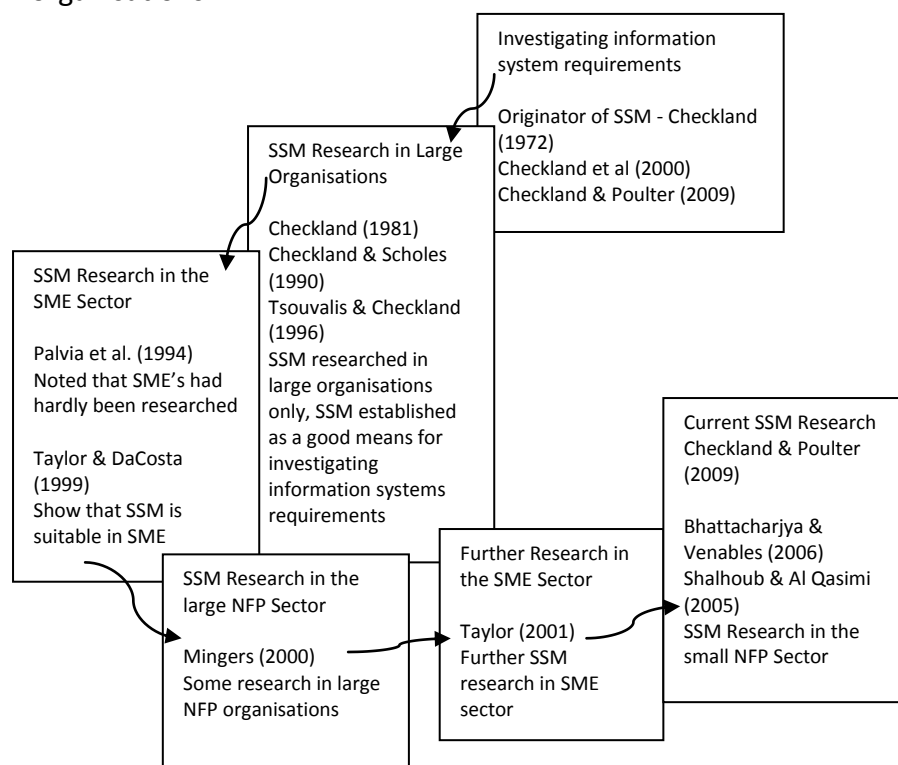
Figure 2.1 Literature Review Outline

2.2 Investigating Information System Requirements

Checkland and Poulter (2009) stated that when investigating information system requirements it can be said that there are two main stream methods of doing this; that of the hard systems approach or that of the soft systems approach. The hard systems approach looks at the situation from a more technological angle, whereas the soft systems approach is more involved with the complex issues around the situation. An engineer may look at the problem and say I can engineer a new system, whereas the soft systems practitioner would look at the problem with a more holistic viewpoint, (Checkland & Poulter, 2009). The Soft System Methodology (SSM) epitomises this viewpoint, (Checkland, Challender, Clarke, Haynes, Hoebeke, Poulter, Scholes & Wood, 2000).

Checkland (1972) started exploring these ideas and introduced SSM in 1972. From 1972 to the present, SSM has been used as a means for investigating information system requirements (Checkland, 1972, 2000; Checkland et al., 2000; Checkland & Poulter, 2009). Section 2.3 will describe the era of SSM expansion during the 1980s to mid 1990s, looking at each of the sectors (large organisations, SMEs and NFPs) in turn.

2.3 SSM Research in Large Organisations

From the early 1980s to mid 1990, SSM was used in the large organisational sector and was established as a useful approach for investigating information system requirements (Checkland, 1981; Checkland & Scholes, 1990; Tsouvalis & Checkland, 1996).

2.4 SSM Research in the SME Sector

Taylor and DaCosta (1999) stated that prior to their research in 1999, most of the SSM research carried out was in the large organisational sector. Research has been carried out in the very small business sector while main stream research has been mainly concerned with the large business sector reported in Management Information Systems (MIS), (Palvia, Means, & Jackson, 1994).

Taylor and DaCosta (1999) successfully researched SSM in a SME showing how beneficial SSM was when investigating information system requirements in a SME. Further to this, it was shown that there was little difference when investigating information system requirements, between large organisations and SMEs, (Taylor & DaCosta, 1999).

2.5 SSM Research in the large NFP Sector

Mingers (2000) carried out three surveys, of practitioners of SSM, in the 1990s. Table 2.1 shows an extract of some of the results in the NFP area. These examples are for large NFP organisations who used SSM. For instance Lehaney & Paul carried out their research in a hospital, Wells also researched in a Hospital, Hindle & Checkland carried out SSM research in the British National Health System as well as Lehaney & Hlupic. There was no evidence of any research in small NFPs.

Table 2.1 Examples of SSM research in the large NFP Sector, excerpt from Table 1,(Mingers, 2000) p.746.

NFP Project	Method / Technique	Reference
Modelling outpatient services	SSM + Simulation	(Lehaney & Paul, 1994)
Nurse Management	SSM	(Wells, 1995)
Contract management in the NHS	SSM	(Hindle & Checkland, 1995)
Health-care information system	SSM	(Masiaschapula, 1995)
Resource planning and allocation	SSM + Simulation	(Lehaney & Hlupic, 1995)

Other examples of SSM research in the large NFP sector are: Research in the British Civil Service and National Health Service, (Checkland & Scholes, 1990): Research in Australia in the health sector, (Fennessy, 2002) and research in a Brazilian University, (Pinheiro, Martinelli, Figueiredo, & Cezarino, 2006).

2.6 Further Research in the SME sector

In 2001 Taylor and others did further research in the SME sector researching SSM in small scale network development (Taylor, Reading, Sheehan & Mulhaney, 2001). This

research highlighted that as the SME sector's importance to the economies of many countries has grown, their increased reliance on IT requires that more research be done in this area (Taylor et al., 2001).

2.7 Current SSM Research

SSM has proven to be as valid a methodology today as it was in the 1980s and 1990s. A recognised professional endorses SSM as a systems approach to combat what he describes as *"the rise of systemic failure!"*, (Ison, 2009). Such strong wording can only suggest that SSM is still a viable approach for investigating information system requirements. Further to this, in 2005 Shaloub and Al Qasimi stated that there is little research in the small NFP sector (Shalhoub & Al Qasimi, 2005) and they pioneered SSM research in the Middle East. In 2006 Bhattacharjya and Venable also concluded that there was little evidence in research literature covering SSM in small NFPs (Bhattacharjya & Venable, 2006).

Another aspect of SSM research to be mentioned briefly here, adding relevance to the SSM approach itself, is the research done within the SSM framework. Two good examples of this are research in the CATWOE, (Bergvall-Kareborn, Mirijamdotter, & Basden, 2004), the CATWOE framework (described in detail in section 3.2), and the research around the use of rich pictures, (Sutrisna & Barrett, 2007). Checkland, in Learning for Action endorses this method for expressing situation graphically, (Checkland & Poulter, 2009).

2.8 Conclusion

The research literature demonstrates there has been a lot of vigorous research around SSM over the past 40 years, showing that it has relevance in the field of software and system development. See figure 2.1 Literature Review Outline on page 13. Also, as the research has covered a period of forty years and still has contemporary ongoing development, we can have confidence in a robust and mature systems methodology. See section 2.7 Current SSM Research. Further to this, it is evident that although a lot of research has been done in large organisations, SME and large NFP sectors, there is little evidence of any research in the small NFP sector. See sections 2.3, 2.4. and 2.5.

Based on the size of the business as an identifying criteria, Taylor and DaCosta (1999) had researched the SME sector and found that SSM was a suitable means for investigating information system requirements, so too should this methodology be for a similar sized NFP organisation.

Chapter 3 will cover the methodology, describing the SSM framework and the case study approach.

Chapter 3: Research Methodology

3.1 Introduction

This dissertation covers a SSM case study in a New Zealand NFP. The aim of this study was to find out if SSM would be suitable for a NFP when investigating information system requirements. The case study approach to researching information system requirements has been argued as a useful approach by researchers, (Benbasat, Goldstein, & Mead, 1987). In this study a qualitative case study approach incorporating the application of the SSM systems methodology and follow up interviews were used.

Firstly, the SSM framework, (Checkland & Poulter, 2009), was applied to identify the problem situation and document the information systems requirements for a specific project in the case study organisation. The project was identified based on the following convenience criteria; project start date, researcher access and project size.

Secondly, interviews were held with four of the participants within the case study department to explore whether they found SSM a useful method for investigating their information system requirements, and if they would recommend this procedure for other departments within the organisation. The interview protocols followed that of the grounded theory approach (Allan, 2003). See section 3.3.

The following sections will first describe the SSM framework (Checkland and Poulter, 2009) and then outline the grounded theory protocols taken in the interviews.

3.1.1 Introduction to the project

The SSM project was to be conducted within a department of the case study NFP. This department has a complement of twelve staff, consisting of a manager, administrator, two team leaders and eight staff within the two teams. Detailed information in regard to the NFP and department cannot be fully addressed here as it would breach a confidentiality agreement between the researcher and the NFP. All of the department's staff was to participate in the SSM workshops and discussions and the NFPs IT manager was to facilitate the workshops. During the workshops, the workshop

facilitator would outline the discussions on the white board in a rich picture format to help understand and record the workshop outcomes. These rich pictures would also be recorded in digital picture format. The below section 3.2 SSM Framework, describes the process through which SSM was to be applied in this project and the section 4.2 SSM Findings describe in detail how the SSM project was applied.

3.2 SSM Framework

The SSM framework adaptation used in this study was a four stage approach as described in the following sections, 3.2.1 to 3.2.4. See also Figure 3.1 SSM Framework.

3.2.1 Find out about the problem situation

The task here is to find out as much about the problem situation as possible. All points of view should be taken into account. The recommended technique is to hold a workshop, with all the department staff, and to build a rich picture describing the relationships between all the parties concerned around the problem situation.

3.2.2 Define the root definition

The technique used here to help define the root definition of the problem situation is called the PQR, which is the what, how and why elements of the situation. Once these elements can be drawn up a root definition can then be formed.

3.2.3 Devise an Activity Model

The characteristics of an Activity Model can be broken down into six definitions; this is known as the CATWOE Model. The CATWOE definitions can be taken from the problem situation and root definition. Each CATWOE definition has a part or parts to play in the Activity Model. The CATWOE definitions have the below characteristics:

- **C**.   Who benefits from the transformation (customers)
- **A**.   Who does the transformation (actors)
- **T**.   What is the output of the transformation
- **W**.   What makes the transformation meaningful (worldview)
- **O**.   Who are the owners of the transformation
- **E**.   What other elements effect the transformation (environment)

3.2.4 Monitor the Activity Model

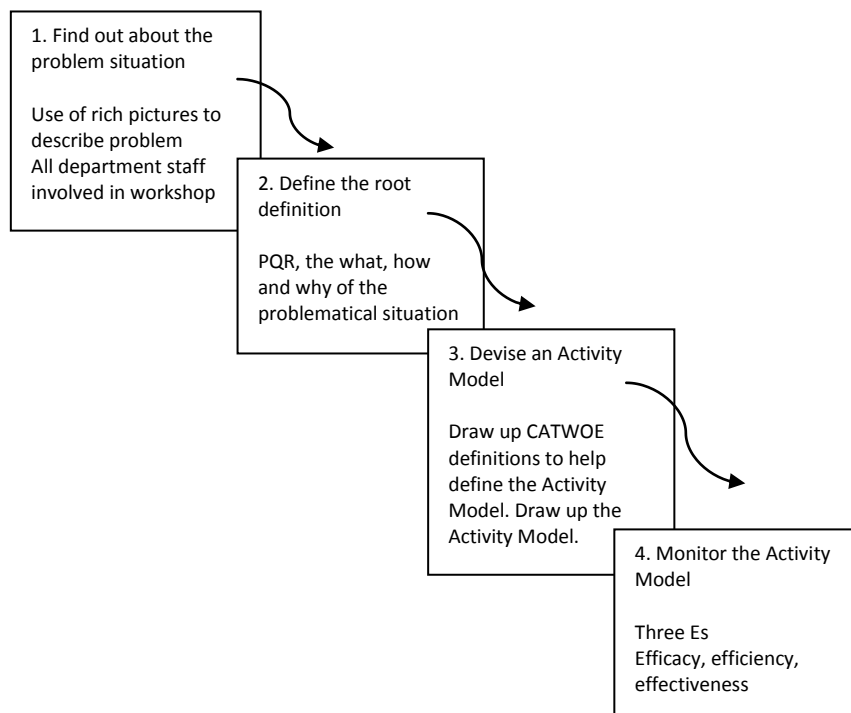Monitor the activity model results against preset criteria that correspond to the

CATWOE, root definition and PQR.

This is known as the 'three Es'.

E1 – efficacy – will the system work and is the transformation achieved?

E2 – efficiency – is the system worthwhile?

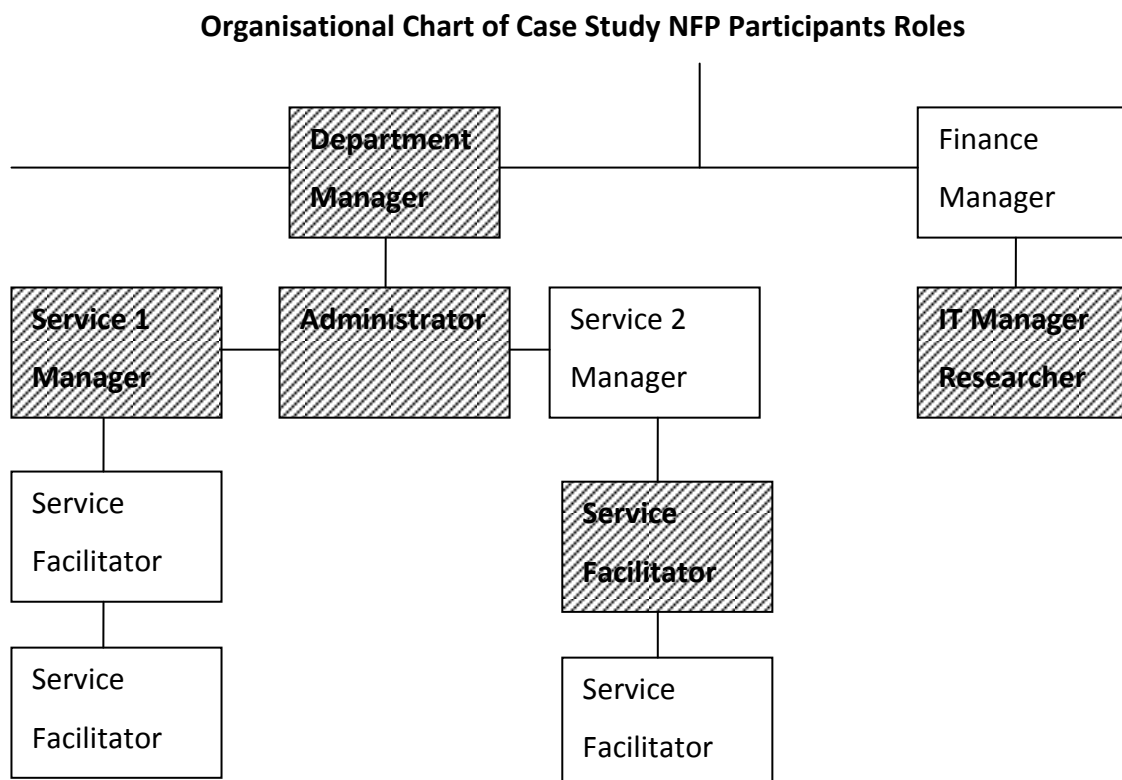**E3** – effectiveness – is the system effective, does it achieve what is intended?

Figure 3.1 SSM Framework adapted from Checkland and Poulter (2009)

3.3 The Grounded Theory Interview Protocols

A qualitative grounded theory approach was taken for the interviews. The purpose of the interviews was to discover how useful the SSM methodology was to the participants, helping them investigate the information system requirements for their services and programmes and in so doing answer the research question: is SSM a suitable methodology for a NFP when investigating information system requirements?

The IT Manager of the NFP was to be the interviewer and researcher of this study. As the IT Manager was from the IT department and had no influence over the participants department it was considered a good fit as there could be no coercion or bias during the interviews. See figure 3.2, NFP Organisational Chart. The highlighted boxes show the organisational roles and the participant's relationship to the IT Manager / Researcher.

Organisational Chart of Case Study NFP Participants Roles

```
                          ┌──────────────┐                      ┌──────────────┐
──────────────────────────│ Department   │──────────────────────│ Finance      │
                          │ Manager      │                      │ Manager      │
                          └──────────────┘                      └──────────────┘
                                 │                                      │
  ┌────────────┐     ┌──────────────┐    ┌────────────┐      ┌──────────────┐
  │ Service 1  │─────│ Administrator│────│ Service 2  │      │ IT Manager   │
  │ Manager    │     │              │    │ Manager    │      │ Researcher   │
  └────────────┘     └──────────────┘    └────────────┘      └──────────────┘
        │                                       │
  ┌────────────┐                         ┌────────────┐
  │ Service    │                         │ Service    │
  │ Facilitator│                         │ Facilitator│
  └────────────┘                         └────────────┘
        │                                       │
  ┌────────────┐                         ┌────────────┐
  │ Service    │                         │ Service    │
  │ Facilitator│                         │ Facilitator│
  └────────────┘                         └────────────┘
```

Figure 3.2 Organisation Chart

Firstly it was decided that a cross section of the staff would be invited to participate in the interviews. A member from each of the two service teams, the manager and the

administrator were invited. The reason for this was that as SSM looked at a world view approach it would be beneficial to see if the different opinions and requirements across the services would surface during the interview process. Figure 3.2 NFP Organisational Chart diagrams the layout of the department.

The participants were informed that the proceedings would be recorded and that their consent was required. Recording of the interviews was crucial as it allowed for a deeper analysis process.

A volunteer, outside of the organisation, was asked to present the consent, questionnaire and interview forms to the participants. See Appendix's A, B and C. This prevented there being any coercion from the researcher in the process of inviting the interviewees. Ethics approval was also applied for and attained from the AUT Ethics Committee.

To avoid careless interview techniques and any introduction of bias Glaser and Strauss introduced the following consideration, (Glaser & Strauss, 1967). An interview protocol, (see Appendix C), was drawn up and handed to the participants prior to the interview, to ensure that the interviewer did not introduce any preconceived ideas. This gave the interview a discussion format and discouraged any leading questions.

The interview was arranged as a face to face meeting with the IT Manager / Researcher at a venue of their choice. Allan (2003) states that interview discussions lead to a richer, qualitative data gathering over that of a list of self completed questions.

The interview findings, the interviewees exact phrases and words taken from the interview recordings by the researcher, were then coded, arranged into concepts, then categorised, as per the grounded theory approach taken by Allan (2003). Allan (2003) describes the grounded theory process of coding as a form of content analysis. During the interview, the researcher looked for words or phrases that highlight issues. These issues were then coded as concepts. The concepts, when looking at data over a number of interviews were then arranged to form categories.

3.4 Conclusion

Chapter 3 has covered the protocols and frameworks of the SSM case study. Chapter 4 will describe the SSM case study findings, present the analysis of these findings and provide some discussion of the findings.

Chapter 4: Analysis

4.1 Introduction

This chapter covers firstly the SSM exercise and interview findings, then goes on to analyse the interview findings in detail.

4.2 SSM Findings

### 4.2.1 Finding out about the problem situation

At the beginning of the experiment the department was using a system designed for donation tracking and campaign management. This system was designed specifically for the not-for-profit sector and although this department did not record donation specific data it had been decided for them to use this system to record their data, as the system was in place and the strategy was that all the departments could then store data in a central database.

A workshop was held with all the staff from the relevant department, to discuss what is called in SSM terms, the problem situation, (Checkland & Poulter, 2009). During a robust discussion a rich picture was drawn, by the workshop facilitator (The NFP IT Manager), to try to reflect the problem situation. See figure 4.1.

In summary, the department in this study did not need to record donation specific data but rather information in regard to their training programmes. The users had found the database difficult to navigate and understand so they eventually stopped using it, reverting back to using excel spreadsheets and various other means of recording their data. The manager had found the system inadequate as no reports where being generated. The previous make do arrangement of bashing square pegs into round holes had not worked. It was decided that this situation be investigated further using SSM as the principle methodology for investigating their information system requirements.

Following the SSM framework, after having set out the problem situation, step two required they look at the what, why and how elements of the situation.
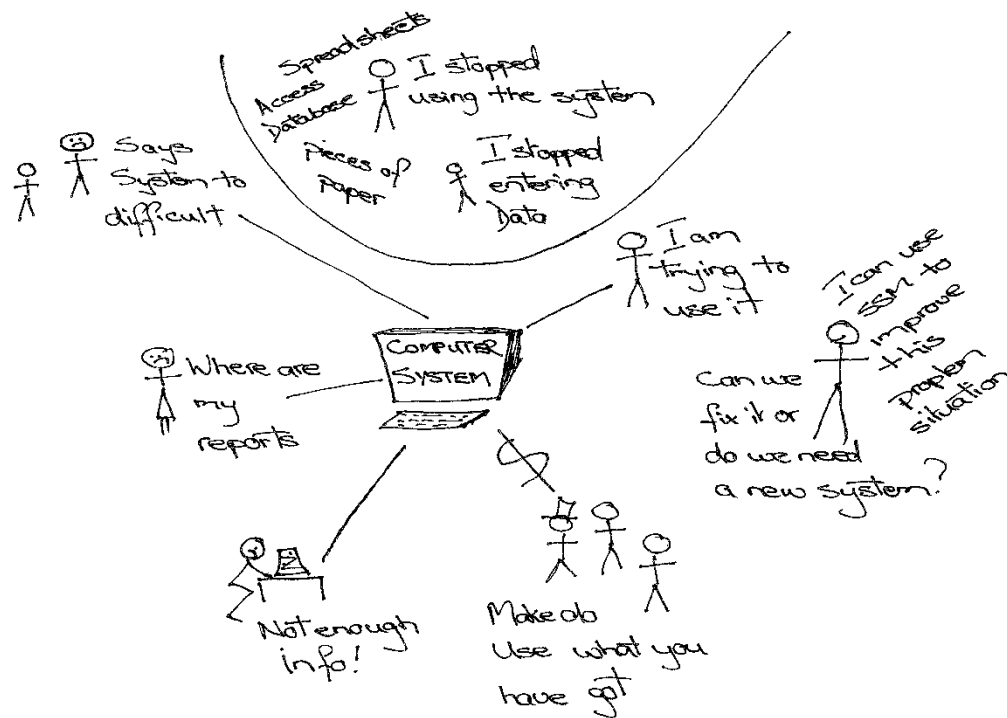
Figure 4.1 The Problem Situation

4.2.2 Define the root definition

To define the root definition the **PQR** (the what (P), how (Q) and why (R) elements of the problem situation) need to be stated.

A workshop, with all the departments staff, was held to discuss the PQR and root definition. Here it was discovered that their main criteria for an information system was to be able to report on the effectiveness of the various services on the targeted communities. This led to the rationale of the PQR and the root definition.

P – Track programme activities

Q – By designing a custom CRM database

R – To accurately report on the programme's effectiveness

From the **PQR**, the following **root definition** was compiled.

An easy to use, custom built CRM database which can accurately reflect the services impact on a specific community.

The third step was to draw up an activity model using the CATWOE definitions from step 3.

4.2.3 Activity Model

The **CATWOE** analysis was then undertaken and was drawn up by the IT Manager (researcher). To help with this analysis, emails where sent to all the participants to gather their individual feedback in regard to what system they required. This gave the researcher some insight to individual participant world views. Following this, a meeting was held with the services manager. From the individual feedback meeting with services manager and by asking the following corresponding questions, the CATWOE was drawn up. See figure 4.2 CATWOE, following the framework provided by Checkland and Poulter (2009) and Table 4.1 CATWOE analysis.
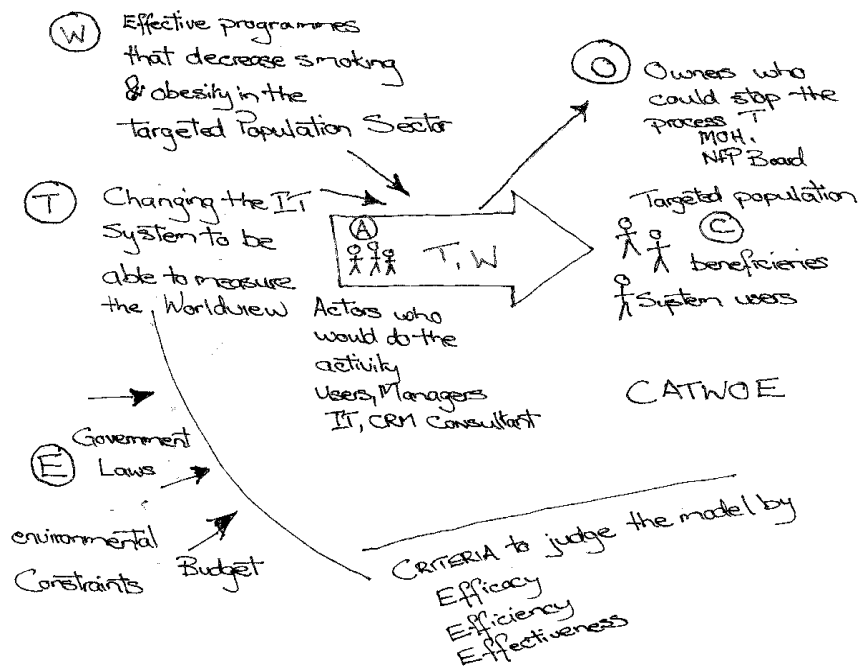
Figure 4.2 CATWOE following the framework provided by Checkland and Poulter (2009)

Table 4.1 CATWOE Analysis

C	Who benefits from the transformation (customers)
	Users, Managers, MOH, specific community
A	Who does the transformation (actors)
	System users, Managers, IT, CRM Consultant
T	What is the output of the transformation
	An effective CRM system
W	What makes the transformation meaningful (worldview)
	The effectiveness of the programmes becomes measurable
O	Who are the owners of the transformation
	NFP Organisation
E	What other elements effect the transformation (environment constraints)
	Government policies, fiscal constraints

From the CATWOE the resulting activity model was devised, see figure 4.3.
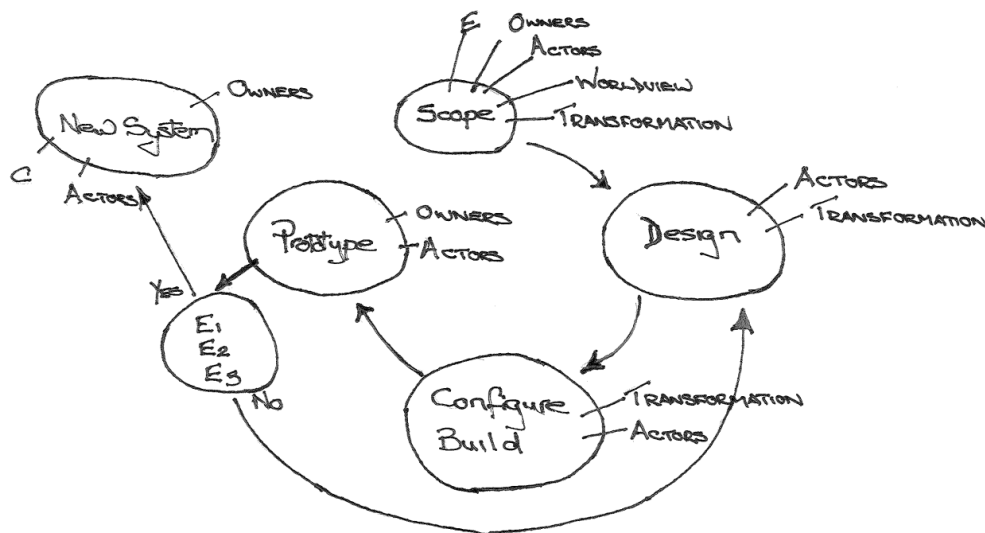
Figure 4.3 Activity Model

The activity model starts with the scoping system requirements process; this required the involvement of the IT Manager, the system owners and all the actors involved. The final scope included the consensus of various world views, which were:-

- managerial reports reflecting the effectiveness of the programmes,
- tracking of members, organisations and programme participants, and
- an easy to use intuitive system.

The design stage followed system scoping, where the IT consultant designed the system entities to reflect the actors requirements and with the transformation being the main criteria in the systems design.

Following the design stage, the configure/build stage was carried out by the IT consultant. The configure/build stage led to the prototype model, which was then tested, in the final step four.

4.2.4 Monitor the Activity Model
The resulting prototype was then tested against the 'three Es'.

E1 – efficacy – will the system work and is the transformation achieved?

E2 – efficiency – is the system worthwhile?

E3 – effectiveness – is the system effective, does it achieve what is intended?

This process would circle back to the design phase should the owners and actors not be satisfied with the rigorous testing of efficacy, efficiency and effectiveness criteria as described above.

Once the prototype had passed, the new system was implemented.

4.2.5 SSM Summary
In summary to this section, the SSM exercise was carried out over a period of four months and over that period a new services information system was first discussed, investigated and then implemented.

Having completed the SSM exercise the next section to this dissertation naturally leads on to the interview findings and finally, the analysis of the research data gathered.

4.3 Interview Findings

Tables 4.1 to 4.6 cover the interview findings, this will be followed by section 4.5, the interview analysis.

Following Allan's (2003) grounded theory approach, see Section 3.3, the interviews have been tabled by ID, Interview Text and then Code – Tables 4.1 to 4.4. From these, identified codes concepts are then compiled in table 4.5. Categories emerged from the concept table and these can be found in Table 4.6. The analysis was then drawn from these tables.

Table 4.1 Interview A

ID	Interview Text	Codes
Px1	He speaks his own language and we just look at each other but don't understand	IT Disconnect with Staff
Px2	When they could see it on the actual screen they made a connection	Visual use of Rich Pictures
Px3	Put in computer language not in the language of the customer, we kind of got lost	IT Disconnect with Staff
Px4	The big picture came across well and towards the end of the project the picture became much clearer and made sense	Visual use of Rich Pictures
Px5	It involved the team right from the beginning, rather than here is the program use it	Buy-In
Px6	Got buy in from the beginning right at the design stage	Buy-In
Px7	Trial period was a good way too, allowed them to practice	Buy-In
Px8	Engages the group	Buy-In
Px9	She knew what you were trying to get at as she saw it through a different lens, and was able to translate it to us	Champion
Px10	If you were going to do this again it would be good to have someone who had an inkling of CRM before there	Champion
Px11	Reflection time for the team	Breaking down barriers
Px12	Inter connection across the services	Breaking down barriers
Px13	Breaks down silos and barriers between teams	Breaking down barriers
Px14	Does need a bit of time	Time consuming
Px15	Doing it before the consultant got here, reduced costs	Reducing Costs
Px16	Doing your homework first	Reducing costs
Px17	Relationship building over time	Time consuming
Px18	Human connection	People engagement
Px19	Inter team engagement	People engagement
Px20	NFP's like us, will find a benefit in breaking down silos	Process benefit - SSM
Px21	Look at the common goal across the teams	Breaking down barriers
Px22	Process breaks down barriers	Breaking down

ID	Interview Text	Codes
		barriers
Px23	Working towards a common goal	Breaking down barriers
Px24	Politics, all of that get thrown out the window	Breaking down barriers
Px25	Definitely encourage other departments	Process benefit - SSM
Px26	You would need an influencer within the team	Champion

Table 4.2 Interview B

ID	Interview Text	Codes
Py1	Opportunity to think about information gathering	People engagement
Py2	Found pictures very useful	Visual use of Rich Pictures
Py3	Brought it back to the beginning	Broader Outlook
Py4	It showed each team what they had and where they overlapped	Breaking down barriers
Py5	A lot of overlapping	Breaking down barriers
Py6	Very beneficial for the team	Breaking down barriers
Py7	Once we were all on the same page, it brought in areas that I had not thought about	Thought provoking
Py8	Looking at what we wanted at the end of the day and why	Thought provoking
Py9	Beneficial to take the time to think about it	Time consuming
Py10	Everyone has a different take on what the system will give them	World view
Py11	Everyone given the opportunity to have their say and put their ideas forward	Buy-In
Py12	Looking forward to using the information that they all had a chance to put together	Buy-In
Py13	They can see that it will be beneficial to them	Buy-In
Py14	Feeling cynical at the beginning, thinking it would be a waste of time but they were given the chance to think about it and they would come back with new ideas	Buy-In
Py15	Took a long time	Time consuming
Py16	Saved money by doing a lot of the work in house	Reducing costs
Py17	No previous experience of CRM at the beginning but now have a better understanding	Buy-In
Py18	Staff now very receptive compared to the beginning	Buy-In
Py19	Find it easy to use during the trial period	Easy to use
Py20	Everyone is happy with the system	Process benefit – CRM
Py21	System provides what they require	Process benefit - CRM
Py22	Process very helpful	Process benefit - SSM
Py23	The fact that if got us all thinking	Thought provoking
Py24	The pictures brought it all together	Visual use of Rich Pictures
Py25	Definitely recommend this process to other departments	Process benefit - SSM
Py26	Very immediate and visual way of getting people to	Visual use of Rich

ID	Interview Text	Codes
	understand what it was that we were aiming for at the end of the day	pictures
Py27	Hand drawn pictures made it relevant and realistic not computer generated	Visual use of Rich Pictures

Table 4.3 Interview C

ID	Interview Text	Codes
Pv1	We all had different needs, but then we got to talk together and realised that some of the needs were quite similar	Breaking down barriers
Pv2	Good approach	Process benefit - SSM
Pv3	Simple easy to use system	Process benefit - CRM
Pv4	Summarises our problem	Process benefit - SSM
Pv5	Concept model too technical	Process too Technical
Pv6	Usually it was put there and you had to use it, you don't usually get the chance to say what you want	Buy-In
Pv7	Using words that belong to us	Buy-In
Pv8	Directly related to us	Buy-In
Pv9	Accurately reflect what we need	Process benefit - CRM
Pv10	More than a database	Process benefit - CRM
Pv11	How it's been designed, really user friendly, that's what we wanted	Process benefit - CRM
Pv12	Getting a lot more out of it as everyone was on the same page	Breaking down barriers
Pv13	Time consuming, but it was good	Time consuming
Pv14	I liked that it was action focused	Process benefit - SSM
Pv15	Focused on our needs	Buy-In
Pv16	Got our buy in	Buy-In
Pv17	Quick instant access to information	Process benefit - CRM
Pv18	Smooth process for me	Process benefit - SSM
Pv19	Really me focused	Buy-In
Pv20	The process has taught us stuff we did not realise	Process benefit - SSM
Pv21	I've learned from the team	Breaking down barriers
Pv22	Increased understanding of each others' services	Breaking down barriers
Pv23	Unexpected learnings	Process benefit - SSM
Pv24	Got our buy in and I was interested about it	Buy-In
Pv25	A really good approach for organisations	Process benefit - SSM
Pv26	Focus on what we want is very effective	Process benefit - SSM
Pv27	Engages the staff including managers	Breaking down barriers
Pv28	The process is based on the organisation's needs	Process benefit - SSM
Pv29	Very clear, very transparent	Process benefit - SSM

Table 4.4 Interview D

ID	Interview Text	Codes
Pz1	Interaction with staff from scratch it became a team effort	Breaking down barriers
Pz2	People rather than IT driven	Process benefit - SSM
Pz3	Translator pivotal in between IT and staff	Champion
Pz4	I do appreciate the process of finding out exactly what we wanted rather than just expecting us to say abc	Process benefit - SSM
Pz5	The approach of having several sessions and people coming back with clearer ideas, is good	Process benefit - SSM
Pz6	Treated with respect	Human interaction
Pz7	Gap of knowledge was fixed by starting from the beginning	Process benefit - SSM
Pz8	Giving the group reassurance of what it could do for us	Process benefit - SSM
Pz9	The more they new about it the more they appreciated what it can do for us	Process benefit - CRM
Pz10	If we do it, the more it will help us	Process benefit - SSM
Pz11	Longer slower process, but it means getting it right	Time consuming
Pz12	Investment getting it right is worth it	Time consuming
Pz13	Need someone with prior techno knowledge	Champion
Pz14	Someone that understood the background, that was pivotal to success	Champion
Pz15	The process did not put pressure on us	Process benefit - SSM
Pz16	Everyone is very clear about the context and the background to it because they were part of the development	Ownership
Pz17	The process allowed us to understand and own it	Ownership
Pz18	You know how it is wired and it is yours	Ownership
Pz19	It is being developed here but it should be good for the rest of the organisation	Process benefit - SSM
Pz20	The process of shaping and shaping it gave a sense of accomplishment	Ownership
Pz21	Find out what makes us tick and what do we want	Process benefit - SSM

The emergence of concepts from interview tables

Table 4.5 Concept Table

IT Disconnect with Staff	Px1, Px3
Visual use of Rich Pictures	Px2, Px4, Py2, Py26, Py27
Buy-In	Px5, Px6, Px7, Px8, Py11, Py12, Py13, Py14, Py17, Py18, Py24, Pv6, Pv7, Pv8, Pv15, Pv16, Pv19, Pv24
Champion	Px9, Px10, Px26, Pz3, Pz13, Pz14
Breaks down barriers	Px11, Px12, Px13, Px21, Px22, Px23, Px24, Py4, Py5, Py6, Pv1, Pv12, Pv21, Pv22, Pv27, Pz1
Time consuming	Px14, Px17, Py9, Py15, Pv13, Pz11, Pz12
People engagement	Px18, Px19, Py1
Reducing Costs	Px15, Px16, Py16
Process benefit - CRM	Py20, Py21, Pv3, Pv9, Pv10, Pv11, Pv17, Pz9,
Process benefit - SSM	Px20, Px25, Py22, Py25, Pv2, Pv4, Pv14, Pv18, Pv20, Pv23, Pv25, Pv26, Pv28, Pv29, Pz2, Pz4, Pz5, Pz7, Pz8, Pz10, Pz15, Pz19, Pz21
Broader Outlook	Py3
Thought provoking	Py7, Py8, Py23
World view	Py10
Easy to use	Py19
Process to technical	Pv5
Human interaction	Pz6
Ownership	Pz16, Pz17, Pz18, Pz20

The emergence of categories from the Concept Table

Table 4.6 Categories Table

Category	Concepts
People (47)	Buy-In (18), breaking down barriers (16), champion (6), ownership (4), people engagement (3)
Process Benefits (45)	Process Benefits - SSM (23), Process Benefits – CRM (8), use of rich pictures (5), thought provoking (3), reducing costs (3), broader outlook (1), world view (1), easy to use (1)
Process Downsides (10)	Time consuming (7), IT disconnect (2), Process to technical (1)

4.4 Interview Analysis

From the analysis of the interview data, three categories emerged, people issues, process benefits and process downsides. See Table 4.6: Categories Table. In this chapter these categories: people issues, process pros and process cons, with their aligned concepts will be discussed.

4.4.1 People Issues

As shown in Table 4.6 Interview Categories, people issues proved to be the largest of the categories. This section will be a discussion on the following concepts found in this category, namely: buy-in, ownership, people engagement, breaking down barriers, and the champion.

4.4.1.1 Buy-In, Ownership, People Engagement

It was apparent that the interviewees considered this to be a major component to the success of the SSM project due to the in depth discussion around buy-in and its importance to project success.

What became clear was that SSM was a people driven process and that by engaging directly with the staff from the beginning, buy-in was achieved. Because of the buy-in, the staff had taken ownership of the new system and were eager to use it. In this case, the soft approach had proven successful, gaining buy-in from the start then leading to ownership through constant people engagement, letting them be part of the decision process as the quote from Interviewee A shows, *"It involved the team right from the beginning, rather than here is the program, use it"*.

The SSM process encouraged the staff to participate and take ownership of the process itself. These involved workshops to discuss the problem situation and root definition, where system wish lists were created and world views explored. Following these scoping sessions the activity model design stage involved staff participation in all aspects of the look, feel and functionality of the new system.

All in all the SSM process proved to be a people motivating process encouraging staff buy in, engagement and ownership, all of these factors contributing to a successful outcome.

4.4.1.2 Breaking down barriers

Breaking down barriers was a rich topic of interest. SSM has already shown in the section 4.4.1.1 that it is a very people orientated process the process of people becoming engaged and committed to a project through buy-in. Breaking down barriers is similar in context to this except that now instead of a singular person, groups or teams are engaged in active discussion and participation of the process. All four interviewees thought that this teamwork aspect helped in a successful outcome to the SSM process.

The whole department was encouraged to engage in the process of finding an information system solution for their teams and services together, as Interviewee D stated, *"through interaction with the staff from scratch it became a team effort".* This horizontal shift of breaking down barriers across the teams and departmental services created a better understanding of what they did and where their services overlapped, thus creating a more holistic approach to the problem situation. The resulting system reflected this philosophy. This was considered a great breakthrough, giving the teams a professional edge that they did not have before.

Another aspect of the SSM process of engaging all departmental members brought to light, was the vertical shift of breaking down barriers. The meaning of the vertical shift is that within the department a better understanding between non managerial and managerial staff was encouraged, as Interviewee A stated, *"politics, all of that got thrown out the window".* This discussion from the bottom to the top again helped in creating a holistic solution and created a better understanding of all the departmental and services needs.

By engaging all the department staff in active discussion the SSM process brought teams and services together, creating a better understanding between staff members. These positive factors contributed towards a successful outcome.

4.4.1.3 Champion

In this context the champion was the department member who managed to keep it all together, the go between the technical and the non technical. The interviewees considered this a vital element contributing to the overall success of the SSM process. Interviewee D emphasised this by stating, *"a translator is pivotal between IT and staff"*.

Having a champion helped pave the way by creating an environment where staff could discuss their concerns, ideas or ask for help in clearing up any misunderstandings of the technical aspects of the process with someone they considered their peer. This also helped create a non threatening environment and helped to facilitate the SSM Process.

As previously mentioned the SSM process is predominantly a people process, but as it was also a process investigating a technical solution for the department, the technical side had to be considered. By having a technical person inside the department this helped bridge the gap between the department staff and the technical people, providing a crucial element towards gaining a successful outcome.

4.4.1.4 People Issues Conclusion

Predominantly, the highlighted factor in this section was that SSM is a people oriented process and, by getting people actively involved across the whole department there is a greater chance of creating an outcome that will satisfy the departmental requirements, thus creating some beneficial outcomes that may not have been discovered having used a different approach to the problem situation.

4.4.2 Process Benefits

Section 4.5.2 will cover the Process Benefits category discussing the following concepts that emerged from the interviews: Process Benefits - SSM, Process Benefits – CRM, use of rich pictures and reducing costs.

4.4.2.1 Process Benefits – SSM

Process Benefits – SSM discusses the major benefits the interviewees brought forward regarding to the SSM process.

All the interviewees agreed that SSM was a good methodology for discovering solutions to a complex problem situation, which in this case was discovering what their requirements were for a information system for their department. They also agreed that it was action focused and focused on what they wanted. This tied in well with the people aspect discussed in the previous sections, confirming that the process benefited by engaging with all the departments staff.

Another insight discovered by the interviewees through the SSM process was that they gained new learning and insights about the department's teams, services and aims. Interviewee C summarised it with the phrase *"unexpected learning"*.

The process encouraged the staff to think about the problem situation and consider other people's world views. The codes *"thought provoking"* and *"broader outlook"* highlighted this aspect of the SSM process. See table 4.5. The benefits here brought about the in depth analysis of requirements for better knowledge of the department's needs and helped the staff realise that a major component of their information system should be that they consider the impacts of their programmes on the targeted communities.

The predominant message about the SSM process was that all interviewees would recommend that other departments within the NFP organisation should use this methodology when researching any business process change.

4.4.2.2 Process Benefits – CRM

The discussion here is around the CRM system which was developed in this project, and whether through the SSM process this was successful. This can be measured here against the root definition devised in the SSM process, *"An easy to use, custom built CRM database, which can accurately reflect the departmental programme's impacts on a specific community"*. See Section 4.2.2.

Interviewee C summed it up with the following comments which succinctly reflects the philosophy of the root definition.

"Simple easy to use system" and *"Accurately reflects what we need"*.

In conclusion, technically the system provides what the department requires in an information system and as Interviewee C stated *"it is more than a database!"*

4.4.2.3 Use of Rich Pictures
This section discusses the use of rich pictures in the SSM process. Checkland (2009) advocates the use of rich pictures in the SSM process as it provides a human element in the graphic representation of the problem situation.

Interviewee B agreed with this sentiment with the following comment, *"hand drawn pictures made it relevant and realistic"*, and also with this remark about the use of rich pictures *"very immediate and visual way of getting people to understand what is was we were aiming for."*

By using rich pictures the staff where able to relate to and understand the problem situation.

4.4.2.4 Reducing Costs
Another aspect of the SSM process was that a lot of the preliminary investigation in the problem situation can be done in house without the need of an outside consultant, eliminating much of the initial expense of consultant charges.

The workshops in the early SSM stages where conducted by the NFP Organisations IT staff and the department concerned staff. The need for a consultant was then required when the design stage was reached. The consultant was briefed with what had previously transpired and agreed to work within the concept model created by the SSM process.

By cutting down much of the expensive consulting time, the interviewees considered this to be a SSM process benefit. As Interviewee A stated, *"Doing it before the consultant got here, reduced costs"* and Interviewee B added, *"saved money by doing a lot of the work in house."*

4.4.2.5 Process Benefits Conclusion
To conclude this section it can be stated that the interviewees considered the SSM process a good tool to use when exploring a complex problem situation. Further to this they stated that they would recommend this process to other departments within the NFP organisation.

4.4.3 Process Downsides

So far the process benefits have been discussed, but as in most situations there is always another side to the coin. This section will discuss the downsides that the interviewees found during the SSM process.

Section 4.5 will cover the Process Downsides and the following concepts found in the interviews will be discussed: time consuming, IT disconnect and process too technical.

4.4.3.1 Time Consuming

The biggest process downside mentioned by the interviewees was that of how time consuming the SSM process was. One of the main characteristics of SSM is that everyone is involved and there is a lot of discussion and meetings, which is time consuming and time is an expensive commodity.

Although this can be considered a downside because of the cost the interviewees did agree that it was necessary for a beneficial outcome. As Interviewee D stated, *"longer slower process, but it meant getting it right."* Getting it right was crucial for a successful outcome.

The time expense can also be offset by having done the preliminary investigations in house before calling in a consultant, thus saving money. See section 4.2.4 Reducing Costs.

Therefore, although the SSM process proved to be time consuming, in this case the pros outweighed the cons, as Interviewee D put it *"the investment of getting it right was worth it!".*

4.4.3.2 IT Disconnect

As the SSM process is predominantly a people process, one must use the language of the people. Bringing in IT jargon can be confusing to people not used to talking in acronyms. Interviewee A put it this way, *"Put in computer language not in the language of the customer, we kind of got lost".*

This was not an inhibiting factor to the SSM process, but rather a lesson learnt for future SSM projects.

4.4.3.3 Process too Technical

The process being too technical was mentioned only once, but is worth mentioning again for future use of SSM. Allan (2003) says that if the concept is meaningful it is worth taking note of it.

Interviewee C suggested that the concept model was too technical and needed to be explained in layman's terms. This is a valid comment, being similar to the above concept of keeping the technical jargon out of the discussion. Being technical has no advantage and rather than broadening the discussion it narrows it down and constricts discussion.

4.4.3.4 Process Downsides Conclusion

Concluding process downsides there were only three items to mention but all three were important factors to take note when conducting an SSM exercise. The process is time consuming but can be countered by the fact that there are cost saving benefits. In discussion, technical language should be kept to a minimum and one should be cognisant of that.

4.4.4 Interview Analysis Summary

In summary to this section, the interview findings tables were presented, followed by the interview analysis with a discussion of the people issues, process benefits and process downsides.

Chapter 5 will delve deeper into the above points in answering whether the case study organisation benefited by using SSM when researching information requirements.

Chapter 5: Conclusions

5.1 Introduction

Taylor and DaCosta (1999) argued that there was little difference, when investigating information system requirements, between large organisations and SMEs, and that SSM was just as suitable for SMEs as it was for large organisations.

In this dissertation a NFP organisation was researched to find out if SSM would be suitable for a NFP when investigating information system requirements, as it was in the case of SME and large organisations. This chapter deals with this question and follows on with some limitations and areas for further research.

5.2 Research Question

The research question investigated in this study was: Is SSM a suitable systems methodology, when researching information system requirements, in a not-for-profit company?

Taylor and DaCosta (1999) found SSM to be a suitable methodology, when researching IT system requirements, for SMEs. When they compared the hard system approach to the soft approach, the soft approach (SSM) proved to be more effective. They stated that the soft approach uncovered system needs that could not have surfaced if the hard approach had been applied. This showed SSM to be as applicable to SMEs as it was to large organisations, as both SMEs and large organisations require a thorough understanding of the problem situation.

Taylor and DaCosta's (1999) example that highlighted the above was the discovery of the different supply requirements between large customers and smaller ones. They stated that in the hard approach, usually the line manager, or applicable manager, would be approached to enquire about system requirements and processes. This approach would not have uncovered the actual customer supply requirements. When discussing the supply requirements with the manager and clerks, a larger scenario

unfolded and these broader requirements were then incorporated into the system design. Had this not have happened only the requirements of the larger customers would have been taken into consideration in the system design. This would have created a hole in the system and the smaller customers, (a large part of the customer base), would have had difficulty in ordering supplies. The system then would have had to undergo further modification to address the newly discovered problem situation.

Similarly, in the NFP SSM process, after robust discussion amongst the NFP staff, it was discovered that rather than just a customer database, they also needed to track the impacts of their services on the targeted communities they worked with. This consideration was duly incorporated into the new system. If this had not happened, a major part of their data collection would have been left out! This would have had a detrimental effect in the future, and again the problem situation would have had to be reviewed as the system would prove inadequate for their needs.

The above two similarities between Taylor and DaCosta's (1999) case study and the NFP case study highlight the importance of undergoing a thorough investigation of the problem situation, with SSM providing the systems methodology to do just that.

Therefore in answering the question posed at the beginning of this dissertation and chapter; is SSM a suitable systems methodology when researching information system requirements in a Non-for-Profit organisation, it can be said that yes SSM did provide a thorough framework for investigating information system requirements in a NFP.

The following section will cover the research limitations and recommendations.

5.3 Limitations

Some limitations had to be considered when undertaking the SSM process and the research.

5.3.1 Limitations Size and Time

Two significant limitations on this research can be put forward in this section. Firstly, that of the constraint of the size of company or department to be researched to bring it within the confines of Taylor and DaCosta's (1999) research. Secondly, that of the time allocated for this project.

The process of researching in the SME or NFP area has its limitations; one of these is that of the size of the company being researched. Both SMEs and NFPs vary in size in regard to how many staff are involved in their information systems. Taylor and DaCosta (1999) studied a SME where eight of the staff would be actively involved with the information system. For the NFP to be a comparable study to the SME in Taylor and DaCosta's (1999) research, a project involving 10 members was chosen to be researched.

When considering a research project of this size, time becomes a significant factor. Taylor and DaCosta's (1999) research project covered a period of 18 months. Unfortunately, this project, due to constraints both within the NFP and the amount given for this dissertation, the entire research project had to be complete within a period of 12 months, with total time for data collection being approximately three months.

The next section covers further research taking into account the above limitations.

5.4 Further Research

Further research can take two directions when taking into consideration the limitations stated in the previous section. Firstly, researching larger or smaller NFPs and secondly, a study with a longer timeframe.

 A few questions can be asked in regard to the number of personnel involved in the SSM process. As SSM is a people process, what is the optimum number of people who can be involved and what is the smallest number of people for SSM to be effective, as this research covered only a department of 10 staff. This gives rise for further research to address this question as it would be an important factor for a NFP to consider when using SSM, as a NFP can range from a sole concern to the size of an international conglomeration.

5.5 Conclusion

In conclusion the SSM research did help the NFP gain important insights into the proposed CRM system. The staff enjoyed the benefit of being consulted in the process of investigating their information system and took the system as their own. This was highlighted in Chapter 4 where the interview analysis showed how SSM encouraged staff participation and by this brought about staff buy-in and ownership of the new information system.

Future research, as related in the above section, in varying sized NFP organisations could be carried out in the NFP area. NFPs can also be encouraged to use SSM when investigating information system requirements, as SSM is a people process and NFPs can identify with this process, for the NFP culture encourages any process which can benefit its staff, (Benz, 2005).

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Participant

Information Sheet

Date Information Sheet Produced: 08/03/2009

Project Title

Soft Issues in IS Projects: Lessons from a Not-For-Profit in New Zealand.

An Invitation

You are invited to participate in the research titled Soft Issues in IS Projects: Lesson from a Not-For-Profit in New Zealand researched by Rory Shimmin. Your participation would be to critique, in an informal interview, the Soft System research method used to investigate a viable system for your department. This research will be used in my dissertation toward achieving a MCIS, Master of Computer and Information Sciences. Please be advised that your participation is voluntary and that you may withdraw at any time without any adverse consequences.

What is the purpose of this research?

The purpose of the research is to critique the Soft Systems Methodology in regard to system research. It is hoped that this methodology will be of assistance to Not for Profits in the future. This research will be undertaken for a dissertation for a Master in Computer and Information Sciences degree.

How was I chosen for this invitation?

This invitation was sent to you as you are a member of the department in which the Soft System Methodology was undertaken.

What will happen in this research?

This project involves the Soft System Methodology approach to system investigation, followed by the critique of same. Participants would be required to participate in an informal interview to discuss their views of how helpful the SSM approach was and if the findings of this methodology were accurate and relative to their department software requirements.

What are the discomforts and risks?

The interview meeting may have some discomforts for you. You may consider confidentiality a risk.

How will these discomforts and risks be alleviated?

To alleviate these discomforts I will arrange that the interview take place in a meeting room of your choice and at a time convenient to you. All recordings of the interview will be securely stored at AUT and destroyed after a six year period. All research data provided in the dissertation will be anonymous as will be the company and department.

What compensation is available for injury or negligence?

In the unlikely event of a physical injury as a result of your participation in this study, rehabilitation and compensation for injury by accident may be available from the Accident Compensation Corporation, providing the incident details satisfy the requirements of the law and the Corporation's regulations.

What opportunity do I have to consider this invitation?

You may reply to this invitation in two months from receipt of said invitation.

How do I agree to participate in this research?

Should you agree to this invitation I will provide a Consent Form for you to sign. You may take the Consent Form away and call me for signing at any time of your choosing. You may still withdraw at any time.

Will I receive feedback on the results of this research?

Yes, I will be happy for you to request a reading of the dissertation on completion. I will inform you as to when it will be available.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr. Judith Symonds, judith.symonds@aut.ac.nz.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEC, Madeline Banda, *madeline.banda@aut.ac.nz* , 921 9999 ext 8044.

Approved by the Auckland University of Technology Ethics Committee on 8th May, 2009. AUTEC Reference number 09/67

Appendix B – Participant Consent Form

Consent Form

Project title: **Soft Issues in IS Projects: Lessons from a Not-For-Profit in New Zealand**

Project Supervisor: **Dr. Judith Symonds**

Researcher: **Rory Shimmin**

○ I have read and understood the information provided about this research project in the Information Sheet dated 08/03/2009.

○ I have had an opportunity to ask questions and to have them answered.

○ I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.

○ I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.

○ If I withdraw, I understand that all relevant information including tapes and transcripts, or parts thereof, will be destroyed.

○ I agree to take part in this research.

○ I wish to receive a copy of the report from the research (please tick one): Yes○ No○

Participant's signature:.........………………………………………………………

Participant's name:.............………………………………………………………

Participant's Contact Details (if appropriate):

…………………………………………………………………………………………..

…………………………………………………………………………………………..

Date:

Approved by the Auckland University of Technology Ethics Committee on 8th May, 2009. AUTEC Reference number 09/67.

Note: The Participant should retain a copy of this form.

Appendix C – Participant Interview Questions

Interview questions

Over the past few months we have been gathering information and discussing in some detail the requirements for a CRM database system for your department. In so doing we have followed the guidelines of system development using the Soft System Methodology. These questions relate to this process and are designed to investigate how useful you found this methodology to be in the design of your CRM database system.

Soft System Methodology

- The Problem Situation

  Can you please comment on the first workshop, titled "Finding out about the problem situation." Was the problem defined in the correct context as to how you perceived the situation in regard to your department's computer system?

- In the PQR section the following where defined –

  P – Track programme activities (What)
  Q – By designing a custom CRM database (How)
  R – To accurately report on the programme's effectiveness (Why)

  "An easy to use, custom built CRM database, which can accurately reflect the departmental programme's impacts on a specific community"

What are your comments in regard to the above statements. Was defining a world view definition helpful? How does the definition relate to your computer system requirements?

- ○ CATWOE

    C. Who benefits from the transformation (customers)

    Users, Managers, MOH, specific community

    A. Who does the transformation (actors)

    System users, Managers, IT, CRM Consultant

    T. What is the output of the transformation

    An effective CRM system

    W. What makes the transformation meaningful (worldview)

    The effectiveness of the programmes becomes measurable

    O. Who are the owners of the transformation

    NFP Organisation

    E. What other elements effect the transformation (environment constraints)

    Government policies, fiscal constraints

    How helpful where these definitions in creating activity models to reflect the process required for a new system design?

- ○ The Three E's

    E1 – efficacy – will the CRM System work and is the transformation achieved?
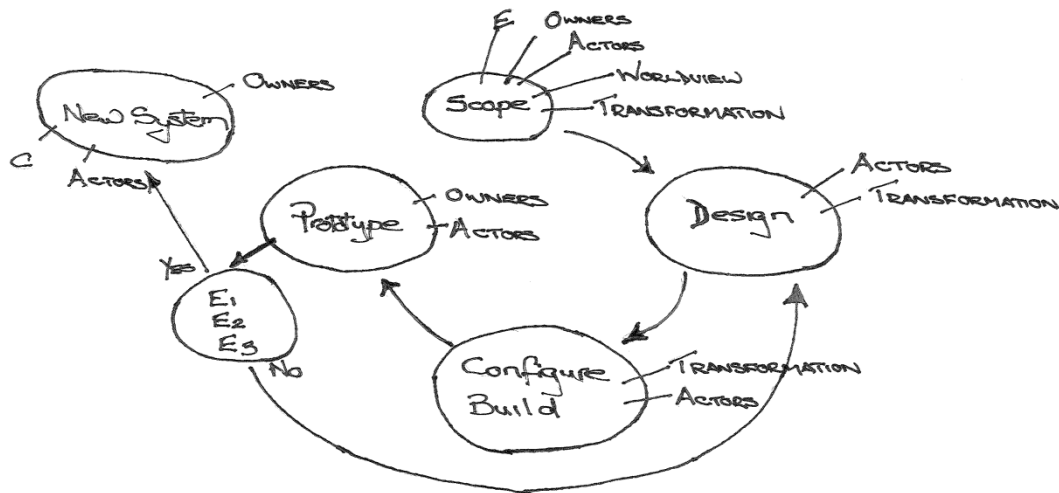
    E2 – efficiency – is the CRM System worthwhile?

    E3 – effectiveness – is the CRM System effective, does it achieve what is intended?

    Please comment on the above. Do you feel that the above criteria are enough

to be able to judge whether the CRM System is adequate for you requirements or not? Why?

o Activity Model

How helpful was this activity model as a process towards designing a new system? Did you find that some sections had more relevance to you?

General Section

o How helpful did you find the process of Soft System Methodology in context to finding what your data requirements where? Why?

o Would you encourage other departments to use the Soft System Methodology to help them clarify their data requirements and system issues? Why?

o Would you think that other Non for Profits could find the Soft System Methodology helpful when looking to designing /changing their systems? Why?